

June 13, 2016

Meagan E. Ormand  
Golder Associates Inc.  
2108 W. Laburnum Ave.  
Suite 200  
Richmond, VA 23227

RE: Project: Bremo Monthly Process  
Pace Project No.: 92300999

Dear Meagan Ormand:

Enclosed are the analytical results for sample(s) received by the laboratory on June 10, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Nicole Gasiorowski  
nicole.gasiorowski@pacelabs.com  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

June 13, 2016

Page 2

cc: Ron DiFrancesco, Golder Associates Inc.  
Martha Smith, Golder Associates Inc.  
Mike Williams, Golder Associates Inc



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## CERTIFICATIONS

Project: Bremo Monthly Process

Pace Project No.: 92300999

---

### Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174  
Alabama Certification #: 41320  
Connecticut Certification #: PH-0216  
Delaware Certification: FL NELAC Reciprocity  
Florida Certification #: E83079  
Georgia Certification #: 955  
Guam Certification: FL NELAC Reciprocity  
Hawaii Certification: FL NELAC Reciprocity  
Illinois Certification #: 200068  
Indiana Certification: FL NELAC Reciprocity  
Kansas Certification #: E-10383  
Louisiana Certification #: FL NELAC Reciprocity  
Louisiana Environmental Certificate #: 05007  
Maryland Certification: #346  
Michigan Certification #: 9911  
Mississippi Certification: FL NELAC Reciprocity  
Missouri Certification #: 236  
Montana Certification #: Cert 0074

Nebraska Certification: NE-OS-28-14  
Nevada Certification: FL NELAC Reciprocity  
New York Certification #: 11608  
North Carolina Environmental Certificate #: 667  
North Carolina Certification #: 12710  
North Dakota Certification #: R-216  
Oklahoma Certification #: D9947  
Pennsylvania Certification #: 68-00547  
Puerto Rico Certification #: FL01264  
South Carolina Certification: #96042001  
Tennessee Certification #: TN02974  
Texas Certification: FL NELAC Reciprocity  
US Virgin Islands Certification: FL NELAC Reciprocity  
Virginia Environmental Certification #: 460165  
Wyoming Certification: FL NELAC Reciprocity  
West Virginia Certification #: 9962C  
Wisconsin Certification #: 399079670  
Wyoming (EPA Region 8): FL NELAC Reciprocity

---

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## SAMPLE ANALYTE COUNT

Project: Bremo Monthly Process

Pace Project No.: 92300999

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92300999001	T1-160610-1138-S3	EPA 200.7	CKJ	8	PASI-O

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## PROJECT NARRATIVE

Project: Bremo Monthly Process

Pace Project No.: 92300999

---

**Method:** EPA 200.7

**Description:** 200.7 MET ICP

**Client:** Golder\_Dominion\_Bremo

**Date:** June 13, 2016

**General Information:**

1 sample was analyzed for EPA 200.7. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 200.7 with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## ANALYTICAL RESULTS

Project: Bremo Monthly Process

Pace Project No.: 92300999

Sample: T1-160610-1138-S3		Lab ID: 92300999001		Collected: 06/10/16 11:38		Received: 06/10/16 14:10		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	263	ug/L	100	1	06/11/16 12:55	06/11/16 16:38	7429-90-5		
Barium	207	ug/L	10.0	1	06/11/16 12:55	06/11/16 16:38	7440-39-3		
Beryllium	ND	ug/L	1.0	1	06/11/16 12:55	06/11/16 16:38	7440-41-7		
Boron	584	ug/L	50.0	1	06/11/16 12:55	06/11/16 16:38	7440-42-8		
Cobalt	ND	ug/L	10.0	1	06/11/16 12:55	06/11/16 16:38	7440-48-4		
Iron	ND	ug/L	250	1	06/11/16 12:55	06/11/16 16:38	7439-89-6		
Molybdenum	99.9	ug/L	10.0	1	06/11/16 12:55	06/11/16 16:38	7439-98-7		
Vanadium	27.1	ug/L	10.0	1	06/11/16 12:55	06/11/16 16:38	7440-62-2		

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## QUALITY CONTROL DATA

Project: Bremo Monthly Process  
Pace Project No.: 92300999

QC Batch:	MPRP/30997	Analysis Method:	EPA 200.7
QC Batch Method:	EPA 200.7	Analysis Description:	200.7 MET
Associated Lab Samples:	92300999001		

METHOD BLANK: 1603826 Matrix: Water  
Associated Lab Samples: 92300999001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	100	06/11/16 16:30	
Barium	ug/L	ND	10.0	06/11/16 16:30	
Beryllium	ug/L	ND	1.0	06/11/16 16:30	
Boron	ug/L	ND	50.0	06/11/16 16:30	
Cobalt	ug/L	ND	10.0	06/11/16 16:30	
Iron	ug/L	ND	250	06/11/16 16:30	
Molybdenum	ug/L	ND	10.0	06/11/16 16:30	
Vanadium	ug/L	ND	10.0	06/11/16 16:30	

LABORATORY CONTROL SAMPLE: 1603827

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	5000	4700	94	85-115	
Barium	ug/L	500	501	100	85-115	
Beryllium	ug/L	50	47.1	94	85-115	
Boron	ug/L	2500	2430	97	85-115	
Cobalt	ug/L	500	499	100	85-115	
Iron	ug/L	2000	1770	88	85-115	
Molybdenum	ug/L	500	485	97	85-115	
Vanadium	ug/L	500	486	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1603828 1603829

Parameter	Units	92300999001		MS		MSD		MS		MSD		MS		MSD		% Rec		% Rec		% Rec		% Rec		Limits		RPD		Qual	
		Result	Conc.	Spike Conc.	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.
Aluminum	ug/L	263	5000	5000	5040	5090	95	96	70-130	1																			
Barium	ug/L	207	500	500	722	731	103	105	70-130	1																			
Beryllium	ug/L	ND	50	50	50.1	48.6	100	97	70-130	3																			
Boron	ug/L	584	2500	2500	3170	3080	103	100	70-130	3																			
Cobalt	ug/L	ND	500	500	506	515	101	103	70-130	2																			
Iron	ug/L	ND	2000	2000	1880	1880	91	91	70-130	0																			
Molybdenum	ug/L	99.9	500	500	596	608	99	102	70-130	2																			
Vanadium	ug/L	27.1	500	500	529	528	100	100	70-130	0																			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..

## QUALIFIERS

Project: Bremo Monthly Process

Pace Project No.: 92300999

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether, Styrene, and Vinyl chloride.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..



## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Bremo Monthly Process

Pace Project No.: 92300999

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92300999001	T1-160610-1138-S3	EPA 200.7	MPRP/30997	EPA 200.7	ICP/18507

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..



Document Name:  
Sample Condition Upon Receipt (SCUR)  
Document No.:  
F-MEC-CS-009-Rev.03

Document Revised: May 24, 2016  
Page 1 of 2  
Issuing Authority:  
Pace Mechanicsville Quality Office

Page 2 of 2 for Internal Use ONLY

Sample Condition Upon Receipt

Client Name:

Bremo/Golder

Project #:

WO#: 92300999



Courier:  
☐ Commercial

☐ Fed Ex ☐ UPS ☐ USPS ☐ Client  
☒ Pace ☐ Other:

Custody Seal Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ No

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other:

Thermometer:

☒ RMD001

Type of Ice:

☒ Wet

☐ Blue

☐ None

☒ Samples on ice, cooling process has begun

Correction Factor: 0.0°C

Cooler Temp Corrected (°C):

0.4

Biological Tissue Frozen? ☐ Yes ☐ No ☐ N/A

Temp should be above freezing to 6°C

USDA Regulated Soil ( ☐ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

Chain of Custody Present?			Comments/Discrepancy:
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	1.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	2.
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	3.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	4.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	5.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	6.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	7.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	8. Note if sediment is visible in the dissolved container
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <u>WN</u>			
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	10. HNC3 pH<2 HCl pH<2 H2SO4 pH<2 NaOH pH>12 NaOH/ZnOAc pH>9
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	11.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	12.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	13.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):			

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☐ No

Person Contacted:

Date/Time:

Comments/Sample

Discrepancy:

Project Manager SCURF Review:

NMG

Date:

6/13/16

Project Manager SRF Review:

NMG

Date:

6/13/16

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers)



www.pacelabs.com

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

## Section A

Required Client Information:

Company:	Golder Associates
Address:	2108 W Laburnum Ave, Ste 200 Richmond, VA 23227
Email To:	Mormand@golder.com
Phone:	804-551-0129 Fax: 804-358-2900
Requested Due Date/TAT:	24 HOUR

## Section B

Required Project Information:

Report To:	Mormand@golder.com
Copy To:	Martha_Smith@golder.com Ron_Difrancesco@golder.com
Purchase Order No.:	
Project Name:	Bremo Monthly Compliance Project
Project Number:	1520-347-220

## Section C

Invoice Information:

Attention:	Meagan Ormand
Company Name:	Golder Associates
Address:	gaipdataentry_invoices@golder.com
Reference:	
Pace Profile #:	

## REGULATORY AGENCY

<input type="checkbox"/> NPDES	<input type="checkbox"/> GROUND WATER	<input type="checkbox"/> DRINKING WATER
<input type="checkbox"/> UST	<input type="checkbox"/> RCRA	<input type="checkbox"/> OTHER
Site Location	VA	
STATE:		

## Requested Analysis Filtered (Y/N)

200.7 - Al, Ba, Be, B, Co	
200.7 - Fe, Mo, V	
ASTM4282 - Free Cyanid	

Residual Chlorine (Y/N)	
Pace Project No./Lab I.D.	02300999

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE DW WATER WASTE WATER PRODUCT SOIL/SOLID OIL WIPE AIR OTHER TSS	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START COMPOSITE END/GRAB	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives Unpreserved H <sub>2</sub> SO <sub>4</sub> HNO <sub>3</sub> HCl NaOH Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Methanol Other	Analysis Test Y/N	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1	T1-160610-1138-53		WW	C	6/10/16 11:38			X	X	X			
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													

## ADDITIONAL COMMENTS

All analyses to be performed under Golder-Pace MSA dated 12/19/2008

REINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
<i>[Signature]</i>	6/10/16	14:10	<i>[Signature]</i>	6/10/16	14:10	
<i>[Signature]</i>	6/10/16	15:00	<i>[Signature]</i>	6/10/16	15:00	

## SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:	<i>L. Howell</i>	DATE Signed (MM/DD/YY):	6/10/16	Temp in °C		Received on Ice (Y/N)		Custody Sealed Cooler (Y/N)		Samples Intact (Y/N)	
SIGNATURE of SAMPLER:	<i>[Signature]</i>										

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

## ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental  
2425 New Holland Pike  
Lancaster, PA 17601

Prepared for:

Pace Analytical Services  
Suite 100  
9800 Kincey Ave  
Huntersville NC 28078

Report Date: June 13, 2016

**Project: 92300999**

Submittal Date: 06/11/2016  
Group Number: 1670967  
PO Number: 15617 NMG  
State of Sample Origin: VA

Client Sample Description

92300999001 T1-160610-1138-S3 Water

Lancaster Labs

(LL) #

8421499

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>.

Electronic Copy To Pace Analytical Services

Attn: Nicole Gasiorowski

Respectfully Submitted,



Bonnie Stadelmann  
Senior Project Manager

(312) 590-3133

Sample Description: 92300999001 T1-160610-1138-S3 Water  
Bremo

LL Sample # WW 8421499  
LL Group # 1670967  
Account # 10945

Project Name: 92300999

Collected: 06/10/2016 11:38

Pace Analytical Services

Submitted: 06/11/2016 10:25

Suite 100

Reported: 06/13/2016 13:49

9800 Kinsey Ave

Huntersville NC 28078

99001

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
12941	Free Cyanide	n.a.	< 10.0	10.0	1

## Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12941	Free Cyanide	OIA-1677-09	1	16164941101A	06/12/2016 14:25	Joseph E McKenzie	1

## Quality Control Summary

Client Name: Pace Analytical Services  
Reported: 06/13/2016 13:49

Group Number: 1670967

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

### Method Blank

Analysis Name	Result	LOQ
	mg/l	mg/l
Batch number: 16164941101A	Sample number(s): 8421499	
Free Cyanide	< 10.0	10.0

### LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l					
Batch number: 16164941101A	Sample number(s): 8421499								
Free Cyanide	0.0400	0.0420			105		86-132		

### MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc	MS Spike Added	MS Conc	MSD Spike Added	MSD Conc	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 16164941101A	Sample number(s): 8421499	UNSPK: P418864								
Free Cyanide	< 0.0060	0.0200	0.0221	0.0200	0.0221	111	110	86-132	0	3

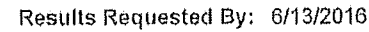
\*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

A-10945  
G-1670967  
S-8421499

Page 15 of 17  
00017181

Client: Pace Analytical

---

**Delivery and Receipt Information**

Delivery Method:	<u>Fed Ex</u>	Arrival Timestamp:	<u>06/11/2016 10:25</u>
Number of Packages:	<u>1</u>	Number of Projects:	<u>1</u>

---

**Arrival Condition Summary**

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace $\geq$ 6mm:	N/A
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Krista Abel (3058) at 11:03 on 06/11/2016

---

**Samples Chilled Details**

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	32170023	0.0	IR	Wet	Y	Loose	N



# Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

<b>RL</b>	Reporting Limit	<b>BMQL</b>	Below Minimum Quantitation Level
<b>N.D.</b>	none detected	<b>MPN</b>	Most Probable Number
<b>TNTC</b>	Too Numerous To Count	<b>CP Units</b>	cobalt-chloroplatinate units
<b>IU</b>	International Units	<b>NTU</b>	nephelometric turbidity units
<b>umhos/cm</b>	micromhos/cm	<b>ng</b>	nanogram(s)
<b>C</b>	degrees Celsius	<b>F</b>	degrees Fahrenheit
<b>meq</b>	milliequivalents	<b>lb.</b>	pound(s)
<b>g</b>	gram(s)	<b>kg</b>	kilogram(s)
<b>µg</b>	microgram(s)	<b>mg</b>	milligram(s)
<b>mL</b>	milliliter(s)	<b>L</b>	liter(s)
<b>m3</b>	cubic meter(s)	<b>µL</b>	microliter(s)
		<b>pg/L</b>	picogram/liter
<b>&lt;</b>	less than		
<b>&gt;</b>	greater than		
<b>ppm</b>	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/L), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
<b>ppb</b>	parts per billion		
<b>Dry weight basis</b>	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

## Laboratory Data Qualifiers:

- B - Analyte detected in the blank
- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value  $\geq$  the Method Detection Limit (MDL or DL) and  $<$  the Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column  $>40\%$ . The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column  $>100\%$ . The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

**Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.**

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

**WARRANTY AND LIMITS OF LIABILITY** - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.